# Mosquito-transmitted Eastern Equine Encephalitis Detected in DNREC's Sentinel Chickens

*Public Urged to Take Precautionary Measures Until Colder Weather Arrives*

Eastern Equine Encephalitis (EEE), a mosquito-transmitted disease, has been detected in Delaware for the first time in 2021, at a sentinel chicken station in southwestern Sussex County sampled Oct. 11 by the Delaware Department of Natural Resources and Environmental Control to monitor for certain mosquito-transmitted diseases. Twenty sentinel chicken stations are sampled weekly throughout the state each summer and fall to help track Eastern Equine Encephalitis (EEE) and West Nile virus (WNV), the primary mosquito-transmitted diseases that are human health threats in Delaware. Mosquito-transmitted virus detections in DNREC's sentinel chickens are unrelated to Delaware's poultry industry.

The first EEE finding in Delaware adds to an active year for WNV, which has been detected in 18 of DNREC's 20 sentinel chicken stations involving a total of 74 WNV-positive chickens from late July to date. Two WNV-human cases have been reported to date in 2021 by the Delaware Public Health Laboratory, and one WNV-equine case has been reported by the Delaware Department of Agriculture. No EEE cases have been reported in humans or horses to date in 2021.

While EEE is rarer than WNV, both EEE and WNV can adversely affect people and horses. Early symptoms of contracting EEE or WNV can be similar, but EEE often becomes more pronounced and debilitating, manifested by meningitis or encephalitis typically resulting in hospitalizations. EEE has a higher human mortality rate of over 30%, with infants, children and

the elderly most vulnerable, according to the U.S. Centers for Disease Control and Prevention. Symptoms of EEE usually start from 4 to 10 days after being bitten by a mosquito infected with EEE. Early EEE symptoms can include headache, high fever, stiff neck, tremors or muscle weakness, with more severe cases progressing to stupor, disorientation, coma, convulsions, paralysis and possibly death. There are no human vaccines for EEE or WNV.

About 80% of people infected with WNV do not show symptoms. About 20% of those infected with WNV develop mild symptoms such as fever, headache, body aches, a skin rash on the chest or back and swollen lymph glands. About one in 150 people infected with WNV might develop severe infection indicted by high fever, disorientation, tremors or convulsions, encephalitis or meningitis, all possibly leading to hospitalization and very rarely death. Survivors of severe cases of WNV can have long-lasting medical complications, including lingering paralysis.

Horse owners should contact their veterinarian immediately if they suspect their horse may be showing signs of WNV or EEE. Symptoms of EEE in horses include fever (102.5-104.5°F), loss of appetite, head pressing, depression or personality change, wobbling or staggering, weakness, blindness, convulsions, muscle tremors in the head and neck, and hind-limb weakness. These signs are also consistent with WNV, although a fever may or may not be present with WNV.

Fall is the peak time of year for mosquito-transmitted disease activity, which will continue until colder weather, possibly until early- to mid-November. While the recent EEE and WNV findings are not cause for alarm, Delaware residents and visitors are urged to be vigilant over the next few weeks to avoid or reduce exposures to mosquito bites. People should take precautions when outdoors in mosquito-prone areas, including wearing long-sleeved shirts and long pants, applying insect repellent containing 10 to 30% diethyl toluamide (DEET)

or other EPA-approved insect repellents in accordance with label instructions and avoiding mosquito-infested areas and times of peak mosquito activity around dusk, dawn and at night.

To reduce mosquito-breeding habitat and mosquito populations and chances for disease transmission, DNREC's Mosquito Control section recommends that property owners drain or remove outdoor items that collect water, such as discarded buckets or containers, uncovered trashcans, stagnant birdbaths, uncovered rain barrels or cisterns, old tires, upright wheelbarrows, flowerpot liners and saucers, depressions in boat tarps, clogged rain gutters, corrugated downspout extenders and unused swimming pools.

In response to EEE and WNV activity, DNREC's Mosquito Control section has increased mosquito population surveillance efforts in the vicinity of virus-positive findings and initiated targeted mosquito control actions as warranted, based on the mosquito species and numbers encountered.

Additional information about mosquitoes and mosquito-transmitted diseases is available from the following resources:

- For mosquito biology/ecology and control, contact the Mosquito Control section office in Dover at 302-739-9917.
- For requests for mosquito relief in upstate areas from Dover north, contact Mosquito Control's Glasgow field office at 302-836-2555.
- For requests for mosquito relief in downstate areas south of Dover, contact Mosquito Control's Milford field office at 302-422-1512.
- For animal health questions, contact the Delaware Department of Agriculture's Poultry and Animal Health Section at 302-698-4500.
- To report suspected cases of human EEE or WNV, call the

Division of Public Health Office of Infectious Disease Epidemiology toll-free at 888-295-5156.

- For more information on Eastern Equine Encephalitis or West Nile Virus, visit www.cdc.gov/westnile/index.html.

**About DNREC**

The Delaware Department of Natural Resources and Environmental Control protects and manages the state's natural resources, protects public health, provides outdoor recreational opportunities, and educates Delawareans about the environment. The DNREC Division of Fish and Wildlife conserves and manages Delaware's fish and wildlife and their habitats, and provides fishing, hunting, wildlife viewing and boating access on nearly 68,000 acres of public land. For more information, visit the website and connect with @DelawareDNREC on Facebook, Twitter or LinkedIn.

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